Barley Bridge Weir Hydro Scheme:
An Innovation History

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Community Innovation for Sustainable Energy research team

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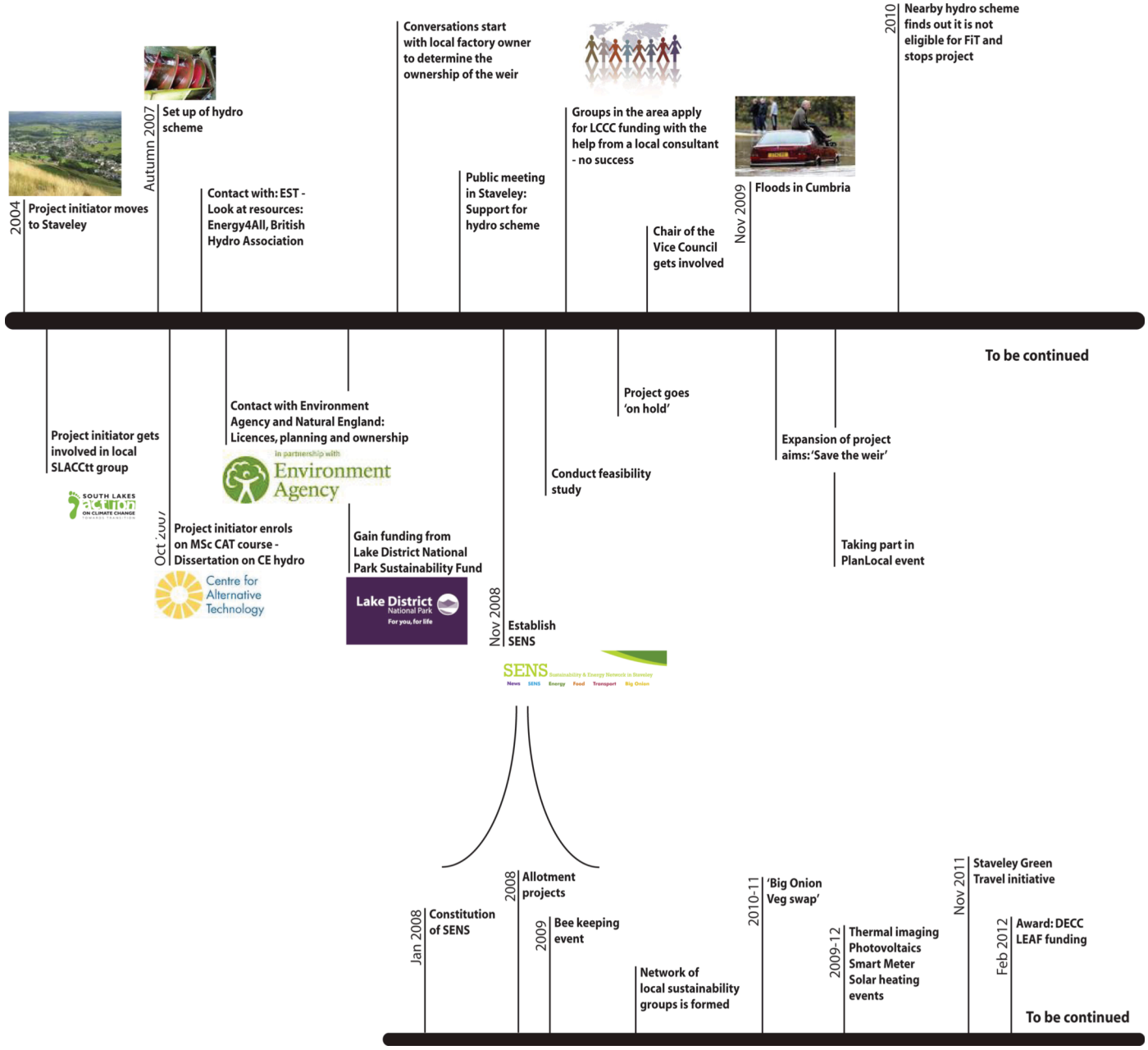
Barley Bridge Weir Hydro-Electric Scheme

The Barley Bridge Weir Hydro-Electric scheme is a community-led energy project based in Cumbria in the village of Staveley. At this point in time, the group consists of eight volunteers (such as a local fisherman, a hydro engineer, a retired surveyor and other community members). This innovation history traces the development of Barley Bridge Weir Hydro-Electric scheme from its initiation in autumn 2007, through to its expansion into the Sustainability & Energy Network in Staveley (SENS), to its current status (in November 2011) of being put on hold by the group. Despite the group's best efforts, they have struggled to overcome various hurdles critical for the continuation of the scheme. One of the main issues has been to determine the ownership of Barley Bridge Weir, which is central to this community-led hydro project.

Key Insights

For the Community Innovations for Sustainable Energy (CISE) project, the Barley Bridge Weir Hydro-Electric scheme is particularly interesting because, through its local networks and efforts to create a portfolio of sustainability projects, it reveals a number of issues that appear to be important to how community energy projects may grow and diffuse. In particular:

- It reveals that personal contacts and chance encounters play as crucial a role when developing sustainable energy projects as wider networks.
- It illustrates that community energy groups can raise their profile (and therefore become more credible and visible) when offering a portfolio of sustainability projects. Presented as a group active over a range of sustainable energy projects means synergies and status enables access to a wider range of resource opportunities compared to a stand-alone energy project.
- It suggests that creating a diversity of activities within a community and a network of local groups can prove to be mutually supporting and boost resilience.
- It reveals that local knowledge, local situation, and local contingencies are important for the development of individual projects. There is a considerable tacit and fine-grained knowledge that is impossible to offer up in a generalised way.
- It shows that a wider regulatory regime context (here in the form of Feed-in-Tariffs and river regulations) is crucial to the development of community energy projects. The unpredictability and variability of this recent context had a huge impact on community energy projects.
- It reveals that a breadth of objectives and motivations to participate in community energy projects can co-exist next to each other. Allowing for these multiple motivations, and aligning them in a skilful and flexible way, can help groups to grow and gain power and resources.
- Finally, it highlights that the success and failure of one project can often exist side-by-side, and have to be viewed from a wider perspective than the original energy project focus.



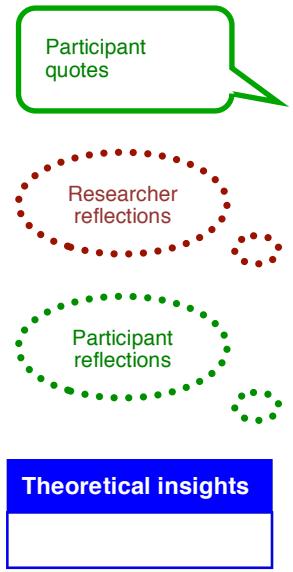
Barley Bridge Weir Hydro-Electric Scheme Timeline

The Community Innovation for Sustainable Energy Research Project

The combined pressures of climate change, peak oil and threats to energy security are increasingly seen as demanding a fundamental transition in the energy system. In this context, there has been a surge of interest and activity in small-scale, sustainable energy projects led by local communities. Examples include insulation clubs, energy awareness and behaviour change networks, and co-operatively-owned small-scale renewable energy systems. Whilst these projects have experimented with a wide range of different sustainable energy solutions, previous research has highlighted the profound challenges community energy projects face in growing, diffusing or even simply surviving. In particular, there is a tendency to treat them as marginal and parallel to mainstream energy systems and, as such, little is known about how or why community energy projects do or do not spread or grow into wider society, nor about their potential influence on wider low-carbon transitions.

The Community Innovation for Sustainable Energy (CISE) research project engages with this gap in knowledge by examining the processes under which community energy projects have spread and grown within the UK. We do this with a view to providing independent advice to policy-makers, community groups and energy businesses about the merits and processes for supporting community energy. To achieve these aims, the CISE project is undertaking a variety of research activities. These activities include working with 12 community energy projects in-depth to explore the key challenges being faced on-the-ground, the extent of networking and learning between projects, and whether this is assisting in the diffusion of community energy.

Inspired by the Institutional Learning and Change Initiative and by Bath University's 'Low Carbon Works' project, the individual reports on each of the 12 projects are being presented as 'innovation histories'. Unlike conventional case study reports, innovation histories aim to gather human stories of what happened during project development to provide a multi-voiced account of the innovation process. They encourage key individuals to reflect on their own actions and how they are linked with the actions of others, and therefore make it possible for external parties to learn from others' real-life experiences. Rather than privileging the perspective of the researcher, innovation histories are presented in a narrative format that juxtaposes quotes from core participants, the researcher's own reflections on key developments, and wider theoretical insights relating to the innovation and diffusion of community energy. These are based on accounts gathered during in-depth interviews with project members and project meetings and information gained from published materials and the project website. Participant and project anonymity has been respected where requested.



Barley Bridge Weir Hydro-Electric Scheme: An Innovation History

The beginning: Setting up a community hydro-electric scheme

The Barley Bridge Weir Hydro-electric scheme story begins with an idea, to set up a community owned hydro scheme in Staveley village. The idea came from one person (the project initiator – the names of project members have been withheld from this report for anonymity reasons), who moved into the area in 2004. The village has a weir, Barley Bridge Weir, which at the time looked promising as a potential community-led hydro scheme. Two privately owned hydro schemes already existed on the local river (Kent River). The plan was to abstract the water above the weir (originally used to control water levels) and channel it through a turbine (such as an Archimedes' screw) that would generate electricity before discharging the water back into the river below the weir.

"The reason why it all started for me was that I moved into this area and I sat looking at the weir wondering where all this water was going. I could see other hydro projects right up the river. This river used to hold 40-50 mills and all operated by water in the past. I was thinking why can't we start doing that again to produce electricity?"

Before starting up her own project, the project initiator decided to go on a Centre for Alternative Technology (CAT) MSc course in autumn 2007 to learn more about renewable technologies. During this time she was able to gain some funding to start up a community hydro scheme in Staveley. In total she gained £1.000 from the Lake District National Park Sustainability Fund (LDNPSF). Further, the project initiator was able develop a network of contacts who could help her with various questions that arose, and started up conversations with the local factory manager (whose company owned the mill) in order to clarify the ownership of the weir and therefore the possibility of making use of it as part of a hydro scheme.

The funding received from LDNPSF for a pre-feasibility study required the project initiator to set up a local group that would help her to work on the Barley Bridge Weir Hydro scheme. The funder was keen to see whether there was wider community support for the project, which such a group could demonstrate. A chance encounter at a green build event with a local resident, who works as an energy advisor and showed great interest in the scheme, provided the initiator with enough encouragement to organise a public meeting in the village; a public meeting that was supposed to 'test' the interest of having a community-led hydro scheme in the village.

This hydro scheme really revealed to me that the barriers of developing a community energy project are sometimes beyond the groups' control - for instance, clarifying the ownership of a crucial asset.

I was struck by the fact how crucial chance encounters can be for the development of projects. Since their first encounter, the local resident and project initiator have been able to give support to each other and share responsibilities.

However, the move from single activist to community group scale might bring with it challenges as well as opportunities?

Networking: Chance encounters and personal contacts

Networking activities are not often based on developing strategic opportunities for the community energy projects. For instance, the groups do not always actively go out to create broad and deep networks to gain access to numerous resources. Networking is also based on chance encounters and personal contacts, or at least initially. However, chance encounters and personal contacts are not enough if the community does not build on them and become more strategic in the build-up of a supportive constituency and project team.

Setting up the Sustainability & Energy Network in Staveley

"We had an overwhelming interest in the subject. All sorts of people came out of the woodwork."

About seventy people turned up to the public meeting, showing their support and an interest in forming a group around the scheme. As a result the Sustainability & Energy Network in Staveley (SENS) was constituted in 2008.

Although initially the group mainly worked on the Barley Bridge Weir Hydro scheme, they were keen to follow a wider sustainability agenda in the village. The objectives of the group are (as outlined on their project website): to reduce the human impact on both the local and global ecology, to increase the use of alternative power sources in Kent Valley and surrounding areas, and to increase local and global awareness of ecological, Fair Trade and sustainability issues in the Kent Valley and surrounding area, via a newsletter and website.

Since setting up the group activities have included: reducing the energy use in the village, raising awareness around climate change, promoting renewable energy and transport ideas and initiating an orchard project, as part of a search to buy lands for allotments and communal growing. Further, the group has conducted thermal imaging and solar heating workshops, handed out smart meters and recently tried to set up a solar PV project in the village (linked to a Cumbria-based Renewable Energy Fund), in addition to working on the Barley Bridge Weir Hydro scheme.

"It was pretty much a one/two man band at the beginning that is not healthy... It needs to move on. I have to do other things and other people have to move in... The succession is important... an organisation would not survive if there are only a few people involved."

The public meeting was the first step along the way of being able to identify a lot of expertise in the village and opened up the possibility of the sharing of knowledge, responsibility and time within the group which was crucial to the progression of the project.

The Sustainability & Energy Network in Staveley and Barley Bridge Weir Hydro scheme group have therefore been closely linked to each other, not only because of their interest in trying to develop renewable energy projects in the village but also through its members. There are two members of each group, including the project initiator, who belong to both groups. The different styles of these groups have been regarded as key to the progression of the groups' projects.

The Barley Bridge Weir Hydro scheme group is a smaller (it has about eight members), "tighter and more focused group". Although they are all volunteers, the group members bring with them particular

technical, financial and environmental skills. To be able to tap into the existing expertise in the village has been a real advantage, as the group did not have to rely on pro bono advice from lawyers, engineers and accountants. They could save costs and gain their information from trustworthy and reliable sources, i.e. their own group members.

On the other hand, the Sustainability & Energy Network in Staveley (SENS) has a much wider sustainability focus and includes more members (about twenty people, who regularly attend meetings - an e-mail contact list consists of about seventy members) with a variety of different skills that do not necessarily relate to being able to develop renewable energy projects. The group is more informal, flexible, and diverse in its objectives and activities than the Barley Bridge Weir Hydro scheme group. The wider focus of the Sustainability & Energy Network in Staveley has encouraged a greater participation, particularly gaining support from important village members (such as members of the Parish Council) that have been crucial to progress projects. Since starting up the Sustainability & Energy Network in Staveley, these members have also started to participate in the Barley Bridge Weir Hydro scheme.

"When we first started SENS it was specifically hydro but now it is a much wider group and that is a good thing. It brought the Chair of the Parish Council in... I know that they needed to be involved in the first place [in the Barley Bridge Weir hydro scheme]... Now they can see how things are going, they are interested and generally supportive."

The development of the Sustainability & Energy Network in Staveley and the Barley Bridge Weir Hydro scheme (i.e. how they gained and also lost their members and in what ways they have worked together) has changed over time. At the beginning, the groups were closely linked, as the main topic of each was to develop the Barley Bridge Weir Hydro scheme. This working relationship soon changed because the Sustainability & Energy Network in Staveley started to conduct other sustainability projects related to food, transport and other energy activities. The Barley Bridge Weir Hydro scheme became one part of a portfolio of sustainability projects in the village.

Since then there has been a clear division of labour between the two groups. The members of the Barley Bridge Weir Hydro scheme are mainly responsible for the progression of the project until it is up and running. The scheme is being run "like a business project". It requires business-like management whereas the wider group, as a collection of projects and a general interest in sustainability, operates differently. For instance, if the hydro scheme was to come to fruition, decision

It seems to me that the hydro scheme drew upon a lot of expertise in the village and a pool of local knowledge to develop their project. This left me wondering how a pre-existing mix of variables shapes the start-up projects.

But what happens to community groups that have to rely on professional services from outside? How do they decide who to work with and who they should trust?

During the interview, I wondered about the reasons for describing the hydro scheme as a 'business project'. What does it actually mean to run a hydro scheme 'like a business' project? The project initiator struggled to answer this question. It might be about bringing particular expertise to a project, being able to make quick decisions, having a clear management structure...

on financial gain (gained through selling the electricity produced by the hydro scheme) would be made by a wider representative group i.e. the Sustainability & Energy Network in Staveley. The project initiator is of the opinion that these decision-making processes require wider community participation. Currently different styles of running the two groups exist – one requiring business-like project management whereas the other something else.

Learning and/or pre-existing local conditions

Local knowledge, local situations, and local contingencies appear to be important for the development of projects. There appears to be a considerable tacit and fine-grained knowledge that is impossible to offer to community groups in a generalised way. Communities might need to have relevant capabilities in place or at least there is the know-how to bring those capabilities from elsewhere. As such, the key capacity might be the ability to bring skilled people together, and to develop those skills that are absent.

Considering the various existing personal contacts of individual group members, it seems to me that these relationships can be equally important to having numerous skills and experiences existing in one's group. They can be drawn on to achieve project aims.

Is the Barley Bridge Weir Hydro scheme feasible?

After setting up the Sustainability & Energy Network in Staveley and gaining some funding from the Lake District National Park Sustainability Fund, the hydro group was able to conduct a feasibility study and obtain two quotations, which outlined the strength and weaknesses of developing the Barley Bridge Weir Hydro scheme. A fellow student of the Centre for Alternative Technology MSc course, who at the time worked for h2ope (a social enterprise that aims to tackle climate change by helping to progress hydro schemes with their projects), conducted the first feasibility study.

He concluded that, at best, the Barley Bridge Weir Hydro scheme would produce between 35-60kW, depending on where the technology is located and its design. If the group is able to gain access to the

old working of the mill (i.e. the inlet channel to the mill), the potential could be doubled. This design would require an even greater involvement of the factory mill owners. Conversations with the MD of the company who owns the mill are still ongoing in order to clarify the ownership of the weir. This information was crucial for the overall progression of the project and the main reason why it has been put on hold.

I was left wondering why the determination of the ownership of the weir had been such a 'tricky' issue. Did the factory owner just not have the time and interest to engage with the community group? Maybe the discussions were somehow uncomfortable or threatening for the owner?

Getting in touch with other local community energy projects

Alongside interactions with the Sustainability & Energy Network in Staveley, the Barley Bridge Weir Hydro scheme group has had in-depth relationships with the South Lake Action on Climate Change towards transition (SLACCtt) group in the neighbouring town of Kendal. The South Lake Action on Climate Change towards transition group has been particularly engaged in trying to set up a network of community projects in Cumbria. They have presented their projects to other communities, helping them to get engaged in similar activities within their own village. Some of the local communities have started to share newsletters and call each other up for advice and support. The hydro scheme project initiator and some of the other members were also members of the South Lake Action on Climate Change towards transition group before setting up the Sustainability & Energy Network in Staveley, and around a similar time when the project initiator had the idea of realising a hydro scheme in the village.

The relationship between the Sustainability & Energy Network in Staveley and the South Lake Action on Climate Change towards transition group has been close right from the start, in particular when it comes to some of their sustainable energy and transport projects. In the past the South Lake Action on Climate Change towards transition group has trialled their projects in Staveley village (such as the Staveley Green Travel initiative). It might be difficult to see how the interactions between these groups have impacted on the development of the Barley Bridge hydro scheme, considering that the two other groups are not directly involved in developing renewable energy projects. Still, there have been numerous indirect impacts:

I was struck by the fact that the decision to create a portfolio of activities whilst broadening the group's aims and completing some projects successfully could have such a significant impact - in this instance, giving the group a certain credibility and visibility.

Firstly, being linked to two groups that had a broad project portfolio gave the Barley Bridge Weir hydro scheme more credibility and visibility in the local area. Sustainable development was a pretty unspoken about subject in the village before starting up the Barley Bridge Weir Hydro scheme and Sustainable & Energy Network in Staveley. It therefore took a lot of awareness raising before the group received any acknowledgment for their work. The group was able to get the development of the hydro scheme on the agenda of a Parish Council meeting; that had been a long process and was only be achieved after gaining enough visibility and credibility in the village.

"There is a lot of awareness now in the village. So I can now talk to the Chair of the Parish Council openly about an audit, and we turn up to planning meetings and our input is listened to. And we've been asked to be represented in various committees in the village so we have not only been accepted as individuals but the idea of sustainability is more accepted within the village."

Creating resilience

Nurturing a broadly sympathetic context for community-led energy projects and being involved in a diversity of sustainability activities has the potential of having a positive impact on the local group's resilience. Community energy projects are able to raise their profile and be regarded as more credible, gaining access to resources and support from key actors (such as the Parish Council). The ability of the group to raise their profile cannot only have a local impact but also help groups to develop regionally. The group can use the information collected locally to stimulate wider activities.

"When I first came here I did not know there was a hydro engineer in the village. I did not know a lawyer and I did not know an accountant. I did not know all of these people. So I had to start from a blank sheet, whereas now I know who to ask."

"If you have got a group doing lots of different things, it [in this case hydro scheme] is part of a bigger picture. If it is one main project... then nothing else survives when the scheme does not survive."

"So local knowledge is really, really helpful so which suppliers are helpful, which people will give you advice, which universities are going to be helpful or not and which departments to contact."

In addition, the Barley Bridge Weir Hydro scheme group members were able to create a network of local contacts that they could turn to for specific questions and support to do with hydro. For instance, the group has developed a close relationship with an independent sustainability researcher in the local area. Since then she has helped with writing funding applications and provided various other forms of support.

Thirdly, through the groups' interaction with each other they were able to share some of the learning and probably most importantly, even though the Barley Bridge Weir Hydro scheme went 'on hold' because of various external factors (such as determining the ownership of the weir), sustainable community based projects continued in the village. For the project initiator it was a difficult decision to put the hydro scheme 'on hold', but by that stage so many other projects had been set up and successfully accomplished through the Sustainability & Energy Network in Staveley and their working relationship with the South Lake Action on Climate Change towards transition group, that sustainability activities continued within the village.

In addition to the South Lake Action on Climate Change towards transition group, other local community-led hydro groups and some privately owned ones, were also extremely helpful in the development of the Barley Bridge Weir Hydro scheme, providing all different kinds of support. These networks of contacts were not something that existed straight away but rather were something that developed over time. These networking activities are based on rather informal processes where 'once you speak to a few people, you meet others on the way'. They provided the Barley Bridge Weir Hydro scheme with local knowledge in order to be able to make advances in the project development process (such as finding out about local funding opportunities).

There remains a lot of untapped knowledge in the areas because of the history of hydro schemes in Cumbria. Local residents have been involved in setting up and maintaining commercial schemes in the past and are therefore aware of the local challenges and opportunities. The Barley Bridge Weir Hydro scheme group considered the advice gained from these local residents as unbiased. Local and community based contacts that derive from informal networking activities were somehow considered to be more trustworthy.

For me, this collaboration highlights that local groups network more widely in order to get help with specific projects, but also network locally to get a portfolio of activities that prove to be mutually supporting and boost resilience.

I wonder whether these informal networking processes that seem to be led by key project members are at risk of weakening or collapsing if the member leaves the project.

Even though the Barley Bridge Weir Hydro scheme group gained the support of numerous people in recent years, including some members of the Parish Council, economic developments in the village have often been prioritised. Taking on the liability for the weir could constitute a considerable risk, and it may be that the company that had responsibility for the weir in the past does not wish to admit ownership and hence liability.

The project initiator noted that the liability of the weir is a considerable risk to anybody, whether a business or a public body.

Replication

The importance of local circumstances and knowledge questions the possibility of aggregating the learning about every project development aspect into a national level knowledge-base, and suggests the replication of general 'good practice' needs good local knowledge. Still, the ability to replicate projects might be assisted through creating links between local community groups. For instance, groups can work together on the same project or share some of their members.

Local Renewable energy projects have major setbacks

Throughout the project development process, the Barley Bridge Weir Hydro scheme group has had close contacts with a local village that also tried to set up a community-led hydro scheme. In 2010 the group watched this nearby hydro scheme (which had already overcome most challenges) being disbanded. The local group got caught between changes in government legislations, concerning state aid rules and the Feed-in-Tariffs: having gained numerous grants from local agencies meant that the group was no longer eligible for Feed-in-Tariffs. Governmental changes to the Feed-in-Tariff had currently had no direct impact on the development of the Barley Bridge Weir Hydro scheme. However, these experiences have decreased the group's confidence in gaining any long lasting financial incentives to create a renewable energy project in the village.

It struck me that the unpredictability and variability of this recent wider regulatory regime context had a huge impact on community energy projects.

"They are probably the first ones to fall by the way side for that reason."

Similarly, the Sustainability & Energy Network in Staveley has been involved in a PV solar project that has struggled to realise their scheme because of the changing nature of the Feed-in-Tariff over the last year. The group was working to a tight schedule, trying to set up the project before the review of the Feed-in-Tariff was meant to come into force at the end of March 2012 (which meant a deduction of the tariff). A recent governmental decision to cut the solar tariff by the middle of December 2011 has put this project on hold. The unpredictability of the eligibility and levels of support from government schemes has caused a certain disbelief in the Barley Bridge Weir Hydro scheme group that these incentives will be around for long enough to be of benefit to the project.

"Feed-in-Tariffs are here now and they will be gone tomorrow."

The group finds it difficult to develop a financial model for a community hydro scheme, considering the long timescale to develop a project, the high start-up costs and unpredictability of government incentives. A hydro project is usually a "complex management problem" where not only financial but also various social, environmental, legal and regulatory issues need to be considered.

Strong connections: Energy policy and community energy

Wider energy policy and energy system developments can have profound consequences for local projects. For instance, big investments into large solar arrays threatened to cause Feed-in-Tariff subsidy to overrun limits set by the Treasury, which prompted the DECC to review the amount of money they pay per unit of renewable energy that is generated. This decision meant that financial models to set up community energy PV projects were no longer viable and projects had to be put 'on hold'. These examples clearly demonstrate that developments in energy policy and the energy system are connected to the progression of community energy. Wider energy policy can either support or (as in this case) hinder the development of community energy projects.

For me this application process demonstrates that community energy groups need to comply with the 'rules of the application game'. In the case of the Barley Bridge Weir hydro scheme this was not possible. The project failed to be included in the application process.

Having a go at getting some 'big' funding

In 2009 numerous funding streams started to emerge for community energy projects. The Sustainability & Energy Network in Staveley decided to apply for the Low Carbon Community Challenge (LCCC) programme organised by the Department of Energy and Climate Change (DECC) with numerous other local community energy groups. With the help of an external advisor the Sustainability & Energy Network in Staveley was able to put in a bid for numerous projects they had lined up at the time, but the Barley Bridge Weir Hydro scheme was not included in the application because various issues had arisen that, even with an injection of money, could not be solved: a lack of clarity about who owns the weir and uncertainties about the historic permission to extract and discharge water from the weir.

Gaining licences, whilst interacting with key intermediaries

Early on in the development process the project initiator of the Barley Bridge Weir Hydro scheme started to contact the Environment Agency and Natural England to enquire about the procedure to apply for numerous licences (such as a water abstract licence) and to gain planning permission. Good relations with these organisations were considered to be crucial. Although some relations were regarded as positive, in particular whenever employees had an understanding of community-led hydro schemes, other working relationships have been varied and some challenges arose over the last years.

Firstly, the Barley Bridge hydro scheme group struggled with the fact that officers in the different departments within these organisations do not seem to communicate with each other very well. On another local hydro scheme, when the group invited some of these organisations to look at the weir, six employees from different departments turned up. This lack of communication, not only within organisations but also between them, can lead to situations where conflicts of interest have been difficult to resolve. For example, the group spoke about a European guideline that supports current attempts to make rivers 'free flowing' again. This guideline impacts on the Environment Agency's

ability to repair the Barley Bridge Weir and to allow for the hydro scheme to progress. The group was generally worried about these developments.

Secondly, gaining responses from these organisations, and knowing which department to approach, is not always a straightforward process. One of the group members tried numerous times to get in touch with the Environment Agency to gain insights into the ownership of the weir but often there was no reply. Recently one of the other group members, who has been in contact with the Agency on a regular basis as part of a short campaign to 'Save the Barley Bridge Weir', received a written response saying the Environment Agency has no responsibility for the weir.

Gaining support from community energy NGOs

Contacts with community energy intermediaries (such as the Energy Savings Trust (EST) and Centre for Sustainable Energy (CSE) have been sporadic throughout the development process. The project initiator took part in a community renewable energy course (run by various intermediaries) but considered the course content to be "superficial" in comparison to workshops that were conducted by specialised professionals (such as lawyers), and who could provide detailed and in-depth advice on one particular topic (such as risk analysis based on particular case studies of renewable schemes). For instance, one of the group members went on a risk mitigation course for renewable energy projects and considered it as very useful because it discussed some of the issues that the group is currently facing and provided real in-depth insights into the topic.

"You had to list all the risks to do with your project and mitigate them and that was really useful because it came just at the right moment. There is a multitude of courses that people want to show you but they often are too superficial and they don't get into the depths and complexities that you need for completing a hydro scheme."

A more recent training session offered by one of the intermediaries introduced the project initiator to a new resource pack on renewable energy projects. The concept behind the training session was to use the pack in the participants' own community to engage them to do their own renewable energy project. Although the project initiator regarded the resource pack as useful, she was wondering whether she was able to use it in her own location. She could show the videos on how to do a renewable energy project (videos included in the pack) to the Sustainability & Energy Network in Staveley or to the South Lake Action on Climate Change towards transition group, but she felt that this was just a way of preaching to the converted. Doing a similar session with the local Parish

It seems that national-level tools might need to be adapted to make them applicable for a local context. As such, I wonder whether it is less about developing the content of these tools but rather finding processes and institutions that make this development possible.

"What I tended to do was to work through certain people so there are two people of the Parish Council who are very pro all this... and they are our channel of communication.

Council would prove more difficult unless it was centred around a local project. In the past the group's approach was to work with some councillors sympathetic to the scheme first and then to engage the others rather than to attend council meetings.

Resources (such as the 'step-by-step' resources developed by Energy4All and the British Hydro Association) that have been produced by community energy intermediaries were considered as useful for start-up groups but no longer for the Barley Bridge Weir Hydro scheme group. The project initiator regarded community hydro schemes as extremely "complex", demanding specific support rather than the know-how on how to develop a renewable energy project, in particular after progressing out of the early stages of the development phase.

"... issues around hydro are so specific that they [intermediaries] cannot provide use with enough detailed advice."

The group currently needs more specific and often local advice. This type of support often cannot be gained during courses or found in resource packs. For instance, case studies are not detailed enough to provide information on who to ring up to conduct pre-feasibility studies. This type of support is often acquired through ringing up other community hydro groups or drawing on a network of informal informants.

I wonder how the on-the-ground experiences and support differ from the info-sharing intermediaries.

Changing the aims of the project in order to keep the idea of a hydro scheme alive

In November 2009 local floods damaged the weir and created a situation that meant that the Barley Bridge Weir Hydro scheme group changed its emphasis to 'Save the Barley Bridge Weir', which drew in others with varied motivations. From the beginning motivations to join either of the groups have been varied within the village but still linked. Some of the group members of the Barley Bridge Weir Hydro scheme regard the project as an opportunity to make use of their skills to be able to repair the weir. They consider the weir to be an important symbol of heritage, i.e. "an icon of the Lake District" and a tourist attraction (Barley Bridge weir is the second most visited tourist site in Cumbria). Other group members are motivated through wanting to realise green projects or even create a more sustainable village for future generations.

The project initiator remarked: "A subgroup of the Save Barley Bridge Weir group still meets to consider hydro issues. All regard the project as an opportunity to make use of their skill to be able to repair the weir, and leave open the possibility of hydro in the future."

Similarly, members of the Sustainability & Energy Network in Staveley are motivated by 'green' issues (such as countering the effects of climate change). The project initiator regarded sustainable grassroots awareness raising as one of the key outcomes of each project. Not all of the members are driven by environmental concerns. Some of them are just keen to be involved in activities that happen in the village in order to develop it socially and economically. These are often people who are already engaged in village activities more widely.

So, there have been overlaps between the motivations of wanting to participate in both groups, which partly explains why they have been linked in the past. However, the floods in Cumbria damaged the weir at a central location to such an extent that some of the people from the Barley Bridge Weir Hydro scheme decided to change the aim of the project. In order to save the weir from falling apart, the previous aim to 'set up a hydro scheme' changed to a 'saving the weir' initiative. Since then the project initiator keeps the Sustainability & Energy Network in Staveley informed of the developments in the Save Barley Bridge Weir group.

Different aims attract different people and the Save Barley Bridge Weir group was significantly strengthened by the presence of members of the Parish Council and others. Currently the members from the scheme are deliberating whether to take matters into their own hands, which would include hiring a crane and repairing the weir in order to stop it from collapsing. These steps would be rather risky, as various liabilities and responsibilities might fall to the group if anything happens to the weir in the future.

I was struck by the fact that the acceptance of different motivations, expectations and visions seem to allow community energy groups to recruit different people with varying backgrounds and skills.

Expectations often vary between group members

A breadth of objectives and motivations to participate in community energy projects can co-exist next to each other. Policy initiatives often tend to presume a single-minded energy focus of these groups, to the expense of all other motivations. Such single-minded focuses do not seem to exist within community energy groups. The existence of multiple expectations can help community energy groups to grow and raise the possibility of gaining more influence and power in local decision-making processes.

Part of a bigger picture

Although the Barley Bridge Weir Hydro scheme still exists and the group continues with their efforts to 'save the weir', the hydro scheme is currently 'on hold'. It has not proceeded beyond its pre-feasibility stage. Although the scheme has stagnated, the mobilisation of people initiated by the project, and the networking involved, has allowed the village to develop a successful project portfolio. This success derived from a willingness to adapt when challenges have arisen, being persistent and not getting dispirited by individual setbacks.

"It is just about persistence and being aware of the bigger picture because you can get very down trodden with individual failures and setbacks, and if you know why you are wanting to achieve what you are wanting to do, whether it is for climate change or saving money in the village... then you are prepared to adapt what you are going to do whilst you are going along."

The project portfolio also provided the project initiator with the confidence to put the hydro scheme 'on hold', as the group recognised that it cannot go any further at this stage. In particular the project initiator felt discouraged after realising that the hydro scheme had not progressed for a while. The possibility to get involved in other sustainability projects in the village helped the group not to lose their motivation and they still keep their hopes up that one day they will have a community-led hydro scheme in Staveley village.

The overall success story can be summed up in the following points:

- Making the hydro scheme part of a portfolio of community-led projects in the village (i.e. setting up the Sustainability & Energy Network in Staveley)
- Raising the awareness of sustainability issues, not only within the community but also within the Parish Council
- Creating a network of local and national community energy practitioners and organisations to gain advice and support